Appendix N. Fugitive Dust Control Plan

Fugitive Dust Control Plan

FERC Docket No. CP09-54-000

June 2010

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List of Abbreviations and Acronyms

HUC	Hydrologic Unit Code
MMDTH/d	million Dekatherms per day
MP	milepost
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
ODEQ	Oregon Department of Environmental Quality
Project	Ruby Pipeline Project
ROW	right-of-way
Ruby	Ruby Pipeline, LLC
UDAQ	Utah Division of Air Quality
WC-AQMD	Washoe County District Health Department – Air Quality Management Division
WDEQ	Wyoming Department of Environmental Quality

1 Introduction

1.1 Objective

The objective of this fugitive dust control plan is to identify potential dust emission sources and provide guidance to construction and field personnel on measures to control the generation of fugitive dust during construction activities associated with the Ruby Pipeline Project (Project). It will be the responsibility of Project contractors, working with designated environmental inspectors, to identify all activities generating fugitive dust, implement feasible control measures, and ensure compliance with applicable fugitive dust regulations.

1.2 Project Description

The Ruby Pipeline Project (Project), proposed by Ruby Pipeline, LLC (Ruby), is comprised of approximately 675.2 miles of 42-inch diameter natural gas pipeline, along with associated compression and measurement facilities, located between Opal, Wyoming and Malin, Oregon. The Project includes an approximate 2.6-mile lateral that would be constructed north from the terminus of the main pipeline (milepost [MP] 672.5) to the Malin Hub. As proposed, the Project would have a design capacity of approximately 1.5 million Dekatherms per day (MMDTH/d), depending on final subscriptions. The Project's rights-of-way (ROW) would cross four states: Wyoming, Utah, Nevada, and Oregon. In addition to the existing King Compressor Station at Opal, Wyoming, Ruby proposes to install four new compressor stations for the Project: one located near the Opal Hub, one in western Utah, one near the mid-point of the Project north of Elko, Nevada, and one northwest of Winnemucca, Nevada.

2 Fugitive Dust Sources

Fugitive dust could be generated directly from pipeline installation and aboveground facility construction. The following construction activities have been identified as having the potential for generating fugitive dust:

- Vehicle and motorized equipment movement on paved and unpaved access roads;
- Vegetation removal;
- Clearing and grading;
- Topsoil removal;
- Cutting and filling;
- Trenching;
- Backfilling;
- Blasting;
- Track-out onto roads;
- Bulk material loading, hauling and unloading;
- Use of material storage piles, and
- Use of parking, staging, and storage areas.

It is the responsibility of the Project contractor(s) and the designated environmental inspector(s) to ensure all sources of dust generation are identified.

Fugitive emissions of volcanic ash, present in areas such as Valley Bottoms and Ancient Shoreline, are not expected to be more significant then fugitive emissions of other soil types during construction activities. All areas of pipeline construction will be monitored for fugitive dust generation. Fugitive dust control measures, including the use of water trucks, would be used to suppress dust in any particular area of concern. A listing of potential fugitive dust control measures to be used during construction activities is included in Section 4 of this plan.

Dust Abatement

Ruby is proposing to withdraw water for use in controlling dust at the locations outlined in Table 2-1. The list of water sources for dust abatement is as up to date as possible. Ruby is in the process of submitting permit applications for temporary water rights for these water sources to the appropriate state agencies (e.g., State Engineers' Offices). Ruby anticipates that for the majority of water sources listed, they will receive temporary water rights and few updates to the water sources will be necessary.

Table 2-1 Summary of Proposed Dust Abatement Water Sources

Fill Source	Existing/New Drill/Compressor Station	MP	GALLONS (DUST ABATE)	BARRELS	TWP	RNG	SEC	QTR	STATE	County
Hams Fork River	Existing	0.98	5,040,000	120,000	21N	114 W	28	LOT-37	WY	Lincoln
Roberson C.S. (From Ham's Fork River)	Compressor Station	5.7	2,000,000	47,619	20N	115 W	24	SW/4	WY	Lincoln
Whitney #2 @ Little Muddy Creek	Existing	23.89	6,720,000	160,000	18N	117 W	4	NW/NW	WY	Uinta
Chevron Well	Existing	39.8	1,680,000	40,000	17N	119 W	6	SE/SE	WY	Uinta
Chevron Hydrant	Existing	40	1,680,000	40,000	18N	119 W	6	Lot 10	WY	Uinta
Hopkins #2 Pond	Existing	49.4	3,360,000	80,000	9N	8E	7	NE/SE	UT	Rich
Schulthess Well	Existing	54.75	1,680,000	40,000	9N	7E	16	NE/SW	UT	Rich
Woodruff Creek	Existing	60.82	1,680,000	40,000	9N	6E	28	SE/SE	UT	Rich
Birch Creek Storage Pond	Existing	64	6,720,000	160,000	9N	6E	19	NW/NE	UT	Rich
Monte Cristo Well "Tonaquint"	Existing	70	3,360,000	80,000	9N	4E	13	NW/NE	UT	Rich
Proposed Drill On Byram	Proposed New Drill	78.34	1,680,000	40,000	9N	3E	34	SE/SE	UT	Cache
5-Mile Ranch Creek Crossing	Existing	78.5	1,680,000	40,000	10N	3E	26	SE/NE	UT	Cache
Little Bear River East Fork	Existing	91	1,680,000	40,000	9N	2E	17	SW/NW	UT	Cache
Hyrum Canal @ Zan Summers	Existing	94.77	1,680,000	40,000	9N	1E	14	NW/SW	UT	Cache

Table 2-1 Summary of Proposed Dust Abatement Water Sources

Fill Source	Existing/New Drill/Compressor Station	MP	GALLONS (DUST ABATE)	BARRELS	TWP	RNG	SEC	QTR	STATE	County
Bear River South Fork	Existing	94.87	1,680,000	40,000	9N	1E	14	NE/NE	UT	Cache
Brigham Hydrant 3 (On Kotter)	Existing	107.4	5,040,000	120,000	9N	2W	12	SE/NE	UT	Box Elder
Corrine Canal	Existing	118.02	1,680,000	40,000	10N	3W	22	SE/NW	UT	Box Elder
Central Canal	Existing	118.52	3,360,000	80,000	10N	3W	21	NE/NE	UT	Box Elder
West Canal	Existing	127.6	1,680,000	40,000	11N	4W	32	SW/SW	UT	Box Elder
West Canal at Faust Road	Existing	132.63	1,680,000	40,000	11N	4W	10	NW/NE	UT	Box Elder
Lyle Nessen (Offline)	Existing	142	1,680,000	40,000	13N	5W	31	NE/SE	UT	Box Elder
Holmgren Pond	Existing	149.03	5,200,000	123,810	12N	7W	21	NE/SW	UT	Box Elder
Wildcat Hills C.S. (From Dees Inc. Well)	Compressor Station	172.5	1,000,000	23,810	12N	11W	16 & 21	SW/SW	UT	Box Elder
Dees Inc. Well	Existing	172.66	1,680,000	40,000	12N	11W	16	SW/SW	UT	Box Elder
BLM Proposed Drill	Proposed New Drill	185	1,680,000	40,000	11N	12W	20	NE/NE	UT	Box Elder
Arimo Ranch Well 1	Existing	200	3,360,000	80,000	10N	15W	7	SW/SE	UT	Box Elder
Arimo Ranch Well 2	Existing	207.54	1,680,000	40,000	9N	15W	8	SW/SE	UT	Box Elder
Arimo Ranch Well 3	Existing	208.5	1,680,000	40,000	9N	15W	17	SW/SE	UT	Box Elder
Arimo Ranch Well 4	Existing	212.61	1,680,000	40,000	9N	16W	31	SE/SE	UT	Box Elder

Table 2-1 Summary of Proposed Dust Abatement

Water Sources

Fill Source	Existing/New Drill/Compressor Station	MP	GALLONS (DUST ABATE)	BARRELS	TWP	RNG	SEC	QTR	STATE	County
Grouse Creek Ranch Well	Existing	222	3,360,000	80,000	9N	18W	16	NE/NE	UT	Box Elder
Walker Winecup 4 Valve Coming From Well 1 In T42N R68E Sec 35 And Reservoir	Existing	239.17	5,040,000	120,000	41N	69E	6	NW/SE	NV	Elko
Walker Winecup Well 2	Existing	250.36	3,360,000	80,000	41N	67E	22	SW/NW	NV	Elko
Walker Winecup	Proposed New Drill	259.63	1,680,000	40,000	41N	66E	19	LOT-4	NV	Elko
Walker Winecup	Proposed New Drill	270.56	1,680,000	40,000	41N	64E	29	SE/SW	NV	Elko
Walker Winecup	Proposed New Drill	280.75	1,680,000	40,000	40N	62E	3	NE/SE	NV	Elko
Tabor Ranch Well	Existing	293.2	3,130,355	74,532	40N	60E	36	NE/SE	NV	Elko
Blm Proposed Drill	Proposed New Drill	300.4	1,680,000	40,000	39N	59E	13	NW/SE	NV	Elko
Blm Proposed Drill	Proposed New Drill	314.25	1,680,000	40,000	39N	57E	13	SE/SW	NV	Elko
Wieland Flat C.S. (Hydro And Dust)	Compressor Station	330	1,000,000	23,810	39N	55E	29	SE/NE	NV	Elko
Wieland Flat	Proposed New Drill	330	1,680,000	40,000	39N	55E	29	SE/NE	NV	Elko
BLM Proposed Drill	Proposed New Drill	339.02	1,680,000	40,000	39N	53E	36	SE/SW	NV	Elko
Proposed Drill On 26-Ranch	Proposed New Drill	351.93	1,680,000	40,000	38N	51E	2	NE/SE	NV	Elko

Table 2-1 Summary of Proposed Dust Abatement

Water Sources

Fill Source	Existing/New Drill/Compressor Station	MP	GALLONS (DUST ABATE)	BARRELS	TWP	RNG	SEC	QTR	STATE	County
Proposed Drill On 26-Ranch	Proposed New Drill	359.6	1,680,000	40,000	39N	50E	31	NW/SE	NV	Elko
Barrick New Drill	Proposed New Drill	368.22	1,680,000	40,000	39N	48E	35	SE/SE	NV	Elko
Barrick Well	Existing	377.88	1,680,000	40,000	38N	47E	5	LOT-2	NV	Elko
BLM Proposed Drill	Proposed New Drill	381	1,680,000	40,000	39N	46E	35	SW/SE	NV	Elko
Blm Propose Drill	Proposed New Drill	391.8	1,680,000	40,000	38N	45E	18	LOT-11	NV	Elko
Christinson Well	Existing	416	5,040,000	120,000	37N	42E	15	NW/NE	NV	Humboldt
Winnimucca Farms Well	Existing	434.12	3,360,000	80,000	38N	39E	17	NW/SW	NV	Humboldt
Walter Vetter Well	Existing	441.51	1,680,000	40,000	39N	38E	12	NE/NW	NV	Humboldt
Leon Frey Well	Existing	452.85	2,520,000	60,000	41N	37E	29	NE/NE	NV	Humboldt
Donna Harrer Well	Existing	465.17	1,680,000	40,000	41N	35E	17	SE/SE	NV	Humboldt
Desert Valley C.S. (Hydro And Dust)	Compressor Station	476.3	1,000,000	23,810	41N	33E	9 & 10	SE/NE 9 SW/NW 10	NV	Humboldt
Desert Valley C.S. (Hydro And Dust)	Compressor Station	476.3	2,520,000	60,000	41N	33E	9 & 10	SE/NE 9 SW/NW 10	NV	Humboldt
Quinn River Ranch Well	Existing	488.76	1,680,000	40,000	42N	31E	11	NE/NW	NV	Humboldt
Pine Forest Ranch Well	Existing	502.38	2,520,000	60,000	41N	28E	11	SE/NE	NV	Humboldt
BLM Proposed Drill	Proposed New Drill	509.78	1,680,000	40,000	42N	27E	13	SE/SE	NV	Humboldt

Table 2-1 Summary of Proposed Dust Abatement Water Sources

Fill Source	Existing/New Drill/Compressor Station	MP	GALLONS (DUST ABATE)	BARRELS	TWP	RNG	SEC	QTR	STATE	County
BLM Existing Well	Existing	525.03	1,680,000	40,000	42N	25E	10	NE/SW	NV	Humboldt
Kudrna Ranch Proposed Drill	Proposed New Drill	534.97	1,680,000	40,000	42N	24E	17	NW/NW	NV	Humboldt
Kennedy Well	Existing	539	1,680,000	40,000	44N	23E	10	SW/SE	NV	Washoe
Double Horseshoe Propose Drill	Proposed New Drill	545.76	1,680,000	40,000	42N	22E	4	SW/NE	NV	Washoe
Vya Construction Camp Existing	Existing	560	1,680,000	40,000	42N	19E	10	NW/SW	NV	Washoe
Ks Ranch	Existing		3,359,523	79988.643	41N	19E	3	Lot 8	NV	Washoe
Hi-Rock Holdings	Existing		1,680,000	40,000	35N	23E	12	SW/SE	NV	Washoe
Pennington Farms	Existing		12,000,000	285,714	43N	19E	4		NV	Washoe
Alice Gladwill Proposed Drill	Proposed New Drill	572.5	1,680,000	40,000	45N	19E	33	NE/NE	NV	Washoe
BLM Proposed Drill	Proposed New Drill	581.93	1,680,000	40,000	46N	18E	13	SW/NW	NV	Washoe
Don Robinson	Existing	591	1,680,000	40,000	40S	23E	24	SE	OR	Lake
Don Robinson Proposed Drill	Proposed New Drill	601.9	3,360,000	80,000	40S	22E	4	SE/NW	OR	Lake
Collins Timber	Existing	610	3,360,000	80,000	39S	20E	10	SW/NW	OR	Lake
Lakeview Fairground Existing Well	Existing	610	1,680,000	40,000	39S	20E	9	SW/SE	OR	Lake
Adair Brown Well	Existing	616	1,680,000	40,000	40S	20E	10	NE/SW	OR	Lake
Bud Garrett Well	Existing	617.22	3,360,000	80,000	40 S	20E	15	LOT-6		Lake

Table 2-1 Summary of Proposed Dust Abatement Water Sources

Fill Source	Existing/New Drill/Compressor Station	MP	GALLONS (DUST ABATE)	BARRELS	TWP	RNG	SEC	QTR	STATE	County
Mello Well	Existing	629.89	1,680,000	40,000	41S	18E	13	NW/NE	OR	Lake
Usa Investments Dry Creek Crossing	Existing	630	3,360,000	80,000	41S	18E	14	NW/S2	OR	Lake
Goose Lake Timber Company Proposed Drill	Proposed New Drill	639.2	1,680,000	40,000	41S	17E	21	NW/NW	OR	Lake
Frank Hammerich Well	Existing	665	3,360,000	80,000	40S	14E	19	NE/SE	OR	Klamath
Spud Hammerich Well	Existing	O.L	3,360,000	80,000	40S	13E	35	lot 9300	OR	Klamath
Mike Byrne Well	Existing	671.9	1,680,000	40,000	41S	13E	19	LOT-4	OR	Klamath
Eric Strum Well	Existing	0.13	3,360,000	80,000	41S	12E	11	SE/NE	OR	Klamath

Key:

BLM Bureau of Land Management
CS Compressor Station
MP Milepost
NV Nevada
OR Oregon
QTR Quarter
RNG Range
SEC Section
TWP Township
UT Utah
WY Wyoming

As indicated in Table 2-1, Ruby has identified new water well locations along the Project. Ruby would acquire the appropriate permits necessary for drilling these water wells to provide hydrostatic test and dust abatement water. Ruby recognizes that some of the surface water sources listed in Table 2-1 may experience reduced flows at some point during construction activities (e.g., the end of the summer season). To address this condition, Ruby would explore an option to utilize other listed water source(s) or identify alternative water source(s).

Abatement measures for dust will be required on the construction ROW or access roads when a visible plume of dust extends more than 300 feet from the source with an estimated opacity exceeding 20 percent (objects partially obscured). The contractor will be responsible for controlling dust by reducing travel speed and/or applying dust suppressants (e.g., water). Assuming each contractor will supply three 80-barrel water trucks for dust abatement and each truck will make ten trips per day, then each contractor would use approximately 96,000 gallons per day from any one water source in proximity to the spread.

Surface Water Basins

The United States is divided and sub-divided into successively smaller hydrologic units that are classified into four levels: regions, sub-regions, basins, and sub-basins. Sub-basins are further divided into watersheds. The Project would pass through 75 surface water basins. A summary of surface water basins that would be crossed by the Project and MPs for each crossing is shown in Table 2-2.

Table 2-2 Surface Water Basins Crossed by the Proposed Ruby Pipeline Project (Route Version 8 - July 2009)

Milepost		Intersecting Length (Miles)	County	State	Watershed	Hydrologic Unit Code
Start	End					
0.1	2.1	2.0	Lincoln	WY	Lower Hams Fork	1404010707
2.1	12.6	10.5	Lincoln	WY	Dry Muddy Creek	1404010705
12.6	13.2	0.6	Lincoln	WY	Little Muddy Creek	1404010802
13.2	13.4	0.2	Lincoln	WY	Dry Muddy Creek	1404010705
13.4	21.1	7.7	Lincoln	WY	Little Muddy Creek	1404010802
21.1	25.2	4.1	Uinta	WY	Little Muddy Creek	1404010802
25.2	26.2	1.0	Uinta	WY	Albert Creek	1404010803
26.2	39.5	13.3	Uinta	WY	Little Muddy Creek	1404010802
39.5	48.1	8.6	Uinta	WY	Bear River-Pleasant Valley Creek	1601010103
48.1	50.8	2.7	Rich	UT	Bear River-Pleasant Valley Creek	1601010103
50.8	54.4	3.6	Rich	UT	Bear River-Big Creek	1601010106
54.4	58.2	3.8	Rich	UT	Saleratus Creek	1601010105
58.2	73.1	14.9	Rich	UT	Woodruff Creek	1601010107
73.1	73.1	<0.1	Rich	UT	Blacksmith Fork	1601020302
73.1	75.9	2.8	Cache	UT	Blacksmith Fork	1601020302
75.9	76.0	0.1	Cache	UT	Headwaters Little Bear River	1601020301

Table 2-2 Surface Water Basins Crossed by the Proposed Ruby Pipeline Project (Route Version 8 - July 2009)

Milepost		Intersecting Length (Miles)	County	State	Watershed	Hydrologic Unit Code
Start	End					
76.0	76.1	0.1	Cache	UT	Blacksmith Fork	1601020302
76.1	76.3	0.2	Cache	UT	Headwaters Little Bear River	1601020301
76.3	76.4	0.1	Cache	UT	Blacksmith Fork	1601020302
76.4	80.6	4.2	Cache	UT	Headwaters Little Bear River	1601020301
80.6	83.1	2.5	Cache	UT	Blacksmith Fork	1601020302
83.1	83.7	0.6	Cache	UT	Headwaters Little Bear River	1601020301
83.7	85.9	2.2	Cache	UT	Blacksmith Fork	1601020302
85.9	86.4	0.5	Cache	UT	Headwaters Little Bear River	1601020301
86.4	86.6	0.2	Cache	UT	Blacksmith Fork	1601020302
86.6	87.0	0.4	Cache	UT	Headwaters Little Bear River	1601020301
87.0	87.0	<0.1	Cache	UT	Blacksmith Fork	1601020302
87.0	101.0	14.0	Cache	UT	Headwaters Little Bear River	1601020301
101.0	101.0	<0.1	Cache	UT	Box Elder Creek-Bear River	1601020405
101.0	118.5	17.5	Box Elder	UT	Box Elder Creek-Bear River	1601020405
118.5	123.5	5.0	Box Elder	UT	Whites Valley	1601020404
123.5	131.0	7.5	Box Elder	UT	Box Elder Creek-Bear River	1601020405
131.0	142.8	11.8	Box Elder	UT	Blue Creek	1602030908
142.8	157.6	14.8	Box Elder	UT	Hansel Valley Wash	1602030905
157.6	168.5	10.9	Box Elder	UT	Outlet Deep Creek	1602030904
168.5	181.7	13.2	Box Elder	UT	Crystal Hollow-Indian Creek	1602030906
181.7	192.7	11.0	Box Elder	UT	Dove Creek	1602030814
192.7	206.5	13.8	Box Elder	UT	Muddy Creek	1602030807
206.5	223.2	16.7	Box Elder	UT	Sand Wash-Pigeon Mountain	1602030806
223.2	228.0	4.8	Box Elder	UT	Lower Grouse Creek	1602030804
228.0	230.6	2.6	Box Elder	UT	Lower Thousand Springs Creek	1602030708
230.6	239.3	8.7	Elko	NV	Lower Thousand Springs Creek	1602030708
239.3	239.4	0.1	Elko	NV	Crittendon Creek	1602030706
239.4	242.2	2.8	Elko	NV	Lower Thousand Springs Creek	1602030708
242.2	254.9	12.7	Elko	NV	Middle Thousand Springs Creek	1602030705
254.9	261.8	6.9	Elko	NV	Toano Draw	1602030701
261.8	282.4	20.6	Elko	NV	Headwaters Thousand Springs Creek	1602030702
282.4	287.6	5.2	Elko	NV	Bishop Creek	1604010102
287.6	295.6	8.0	Elko	NV	Tabor Creek	1604010103
295.6	309.7	14.1	Elko	NV	Lower Marys River	1604010105
309.7	323.0	13.3	Elko	NV	Lower North Fork Humboldt River	1604010204
323.0	341.5	18.5	Elko	NV	Pie Creek	1604010202
341.5	341.7	0.2	Elko	NV	Headwaters South Fork Owyhee River	1705010501
341.7	347.6	5.9	Elko	NV	Upper Maggie Creek	1604010110
347.6	348.0	0.4	Elko	NV	Headwaters South Fork Owyhee River	1705010501
348.0	348.1	0.1	Elko	NV	Upper Maggie Creek	1604010110
348.1	348.9	0.8	Elko	NV	Headwaters South Fork Owyhee River	1705010501
348.9	348.9	<0.1	Elko	NV	Upper Maggie Creek	1604010110
348.9	357.0	8.1	Elko	NV	Headwaters South Fork Owyhee River	1705010501
357.0	374.5	17.5	Elko	NV	Willow Creek	1604010601

Table 2-2 Surface Water Basins Crossed by the Proposed Ruby Pipeline Project (Route Version 8 - July 2009)

Milepost		Intersecting Length (Miles)	County	State	Watershed	Hydrologic Unit Code
Start	End					
374.5	374.6	0.1	Elko	NV	Upper Rock Creek	1604010602
374.6	374.9	0.3	Elko	NV	Willow Creek	1604010601
374.9	378.4	3.5	Elko	NV	Upper Rock Creek	1604010602
378.4	384.9	6.5	Elko	NV	Middle Rock Creek	1604010604
384.9	396.7	11.8	Elko	NV	Evans Creek	1604010514
396.7	404.4	7.7	Humboldt	NV	Evans Creek	1604010514
404.4	417.5	13.1	Humboldt	NV	Kelly Creek – Humboldt River	1604010515
417.5	422.3	4.8	Humboldt	NV	Rock Creek – Humboldt River	1604010801
422.3	433.2	10.9	Humboldt	NV	Paradise Canyon - Little Humboldt River	1604010908
433.2	437.6	4.4	Humboldt	NV	Big Cottonwood Creek	1604010906
437.6	439.2	1.6	Humboldt	NV	Paradise Canyon - Little Humboldt River	1604010908
439.2	444.5	5.3	Humboldt	NV	Big Cottonwood Creek	1604010906
444.5	461.5	17.0	Humboldt	NV	Silver State Valley	1604020105
461.5	463.8	1.2	Humboldt	NV	Crowley Creek-Quinn River	1604020106
463.8	465.0	1.2	Humboldt	NV	Lower Bottle Creek Slough	1604020112
465.0	465.5	0.5	Humboldt	NV	Crowley Creek-Quinn River	1604020106
465.5	474.3	8.8	Humboldt	NV	Lower Bottle Creek Slough	1604020112
474.3	476.4	2.1	Humboldt	NV	King's River Valley-Quinn River	1604020113
476.4	485.9	9.5	Humboldt	NV	Bilk Creek - Quinn River	1604020201
485.9	496.0	10.1	Humboldt	NV	Deep Creek - Quinn River	1604020206
496.0	509.2	13.2	Humboldt	NV	Leonard Creek	1604020204
509.2	519.7	10.5	Humboldt	NV	Craine Creek	1604020505
519.7	525.7	6.0	Humboldt	NV	Mud Meadow Crk-Frontal Back Rock Dst	1604020213
525.7	525.8	0.1	Humboldt	NV	Virgin Creek	1604020502
525.8	525.9	0.1	Humboldt	NV	Mud Meadow Crk-Frontal Back Rock Dst	1604020213
525.9	530.6	4.7	Humboldt	NV	Virgin Creek	1604020502
530.6	536.0	5.4	Humboldt	NV	High Rock Creek	1604020301
536.0	543.2	7.2	Washoe	NV	High Rock Creek	1604020301
543.2	554.9	11.7	Washoe	NV	Massacre Lake	1604020401
554.9	557.9	3.0	Washoe	NV	Fortynine Lake	1604020402
557.9	575.3	17.4	Washoe	NV	Alkali Lake	1604020403
575.3	588.2	12.9	Washoe	NV	Twentymile Creek	1712000701
588.2	598.4	10.2	Lake	OR	Twentymile Creek	1712000701
598.4	598.5	0.1	Lake	OR	Deep Creek	1712000703
598.5	598.5	<0.1	Lake	OR	Twentymile Creek	1712000701
598.5	610.0	11.5	Lake	OR	Deep Creek	1712000703
610.0	611.8	1.8	Lake	OR	Thomas Creek	1802000102
611.8	620.1	8.3	Lake	OR	Willow Creek-Frontal Goose Lake	1802000103
620.1	620.3	0.2	Lake	OR	Thomas Creek	1802000102
620.3	620.6	0.3	Lake	OR	Drews Creek	1802000101
620.6	621.0	0.5	Lake	OR	Goose Lake	1802000105
621.0	621.0	0.2	Lake	OR	Drews Creek	1802000101
621.0	622.0	1.0	Lake	OR	Goose Lake	1802000105
622.0	622.3	0.3	Lake	OR	Drews Creek	1802000101

Table 2-2 Surface Water Basins Crossed by the Proposed Ruby Pipeline Project (Route Version 8 - July 2009)

Milepost		Intersecting Length (Miles)	County	State	Watershed	Hydrologic Unit Code
Start	End					
622.3	622.4	0.1	Lake	OR	Goose Lake	1802000105
622.4	622.7	0.3	Lake	OR	Drews Creek	1802000101
622.7	622.8	0.1	Lake	OR	Goose Lake	1802000105
622.8	622.8	<0.1	Lake	OR	Drews Creek	1802000101
622.8	623.0	0.2	Lake	OR	Goose Lake	1802000105
623.0	624.2	1.2	Lake	OR	Drews Creek	1802000101
624.2	624.2	<0.1	Lake	OR	Dry Creek-Frontal Goose Lake	1802000104
624.2	625.8	1.5	Lake	OR	Goose Lake	1802000105
625.8	625.9	0.1	Lake	OR	Dry Creek-Frontal Goose Lake	1802000104
625.9	625.9	<0.1	Lake	OR	Goose Lake	1802000105
625.9	626.2	0.3	Lake	OR	Dry Creek-Frontal Goose Lake	1802000104
626.2	626.2	<0.1	Lake	OR	Goose Lake	1802000105
626.2	626.3	0.1	Lake	OR	Dry Creek-Frontal Goose Lake	1802000104
626.3	626.3	<0.1	Lake	OR	Goose Lake	1802000105
626.3	626.3	<0.1	Lake	OR	Dry Creek-Frontal Goose Lake	1802000104
626.3	626.4	0.1	Lake	OR	Goose Lake	1802000105
626.4	626.9	0.5	Lake	OR	Dry Creek-Frontal Goose Lake	1802000104
626.9	627.3	0.4	Lake	OR	Goose Lake	1802000105
627.3	638.2	2.1	Lake	OR	Dry Creek-Frontal Goose Lake	1802000104
638.2	647.3	9.1	Lake	OR	North Fork Willow Creek-Willow Creek	1801020402
647.3	649.3	2.0	Klamath	OR	North Fork Willow Creek-Willow Creek	1801020402
649.3	666.1	7.3	Klamath	OR	Rock Creek-Lost River	1801020404
666.1	666.8	0.7	Klamath	OR	Langell Valley-Lost River	1801020406
666.8	667.3	0.5	Klamath	OR	Rock Creek-Lost River	1801020404
667.3	669.0	1.7	Klamath	OR	Copic Bay	1801020411
669.0	672.6	3.6	Klamath	OR	Mills Creek-Lost River	1801020409

Data Source: http://datagateway.nrcs.usda.gov/Catalog/ProductDescription/WBDHU12.html

Notes: Where Hydrologic Unit Code (HUC) - 10 data were not available, HUC - 8 data were used.

3 Applicable Regulatory Requirements

The following air quality agencies are responsible for air quality management in areas of Project construction activities:

- Wyoming Department of Environmental Quality (WDEQ);
- Utah Division of Air Quality (UDAQ);
- Nevada Department of Environmental Protection (NDEP), for all parts of Nevada except Washoe County;
- Washoe County District Health Department – Air Quality Management Division (WC-AQMD); and
- Oregon Department of Environmental Quality (ODEQ).

A summary of the air quality agency fugitive dust regulations with requirements potentially applicable to Project construction activities is presented in Table 3-1. The NDEP and WC-AQMD require specific plans and/or permits for large-scale construction projects. Prior to initial construction activities, an application for a surface area disturbance permit/fugitive dust control plan for Project construction activities in Elko and Humboldt counties, Nevada would be prepared and submitted to the NDEP and an application for a dust control permit for Project construction activities in Washoe County, Nevada will be prepared and submitted to the WC-AQMD.

Table 3-1 Applicable Fugitive Dust Regulations

Air Quality Agency	Rule Number and Title	Rule Description
WDEQ	Chapter 3/Section 2/Subsection (f) (Fugitive Dust)	Requirements for fugitive dust control.
UDAQ	R307-205 (Fugitive Emissions and Fugitive Dust)	Establishes minimum work practices and emission standards for sources of fugitive emissions.
WC-AQMD	040.030 (Dust Control)	The purpose of this rule is to limit particulate material emissions into the ambient air from any property, operations or activities that may serve as a fugitive dust source.
NDEP	NAC 445B.22037 (Emissions of Particulate Matter: Fugitive Dust)	Requirements for fugitive dust control and requirements for dust control plans and permits.

4 Fugitive Dust Control Measures

The generation of fugitive dust during construction activities would be reduced through the application of appropriate control measures. Abatement measures will be utilized as needed and appropriate to a particular situation. Based on typical practices for natural gas pipeline installation and the requirements of the aforementioned agencies, the following specific control measures will be used as needed to control fugitive dust emissions for the Project.

- Utilize existing public and private roads and pipeline ROW for access during construction wherever possible.
- Apply water one or more times per day to all affected unpaved roads, unpaved haul/access roads, and staging areas (when in use).
- When appropriate, apply a water/magnesium chloride mixture as needed as a dust suppressant. The use of magnesium chloride will be restricted in sensitive vegetative areas, such as greater sage-grouse core areas. In these sensitive areas, either water only or alternative dust suppressants would be considered.
- Reduce vehicle speeds on all unpaved roads, and unpaved haul and access roads. Speed limits may be set on unpaved roads.
- Clean up track-out and/or carry-out areas at paved road access points at a minimum of once every 48 hours.
- Cover all haul truck loads, or maintain at least six inches of freeboard space in each cargo compartment. Ensure that all haul truck cargo compartments are constructed and maintained to minimize spillage and loss of materials, and clean or wash each cargo compartment at the delivery site after removal of the bulk materials. Haul truck loads of sand, gravel, solid trash, or other loose material will be covered.
- Apply water to active construction areas as needed. Areas should be pre-watered and soils maintained in a stabilized condition where support equipment and vehicles will operate. Water disturbed soils to form a crust.
- For temporary surfaces during periods of inactivity, restrict vehicular access by means of either fencing or signage, and apply water to comply with the stabilized surface requirements.

Water trucks will be the primary means of dust abatement during all phases of construction. Water spray will be controlled so that over-spraying and pooling will be avoided to the extent possible. Where roads are paved, no dust mitigation may be necessary

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5 Inspection, Monitoring, and Recordkeeping

The Project contractors will implement the dust control measures specified in this plan and in the dust control permits issued by NDEP and WC-AQMD. Environmental inspectors will be primarily responsible for monitoring and enforcing the implementation of needed dust control measures. The inspectors will also be responsible for making sure that dust control is effective and proper documentation is maintained. All construction site personnel will be educated on the measures outlined in this plan.

Field inspection for dust control will occur daily. The Project contractor(s) and the environmental inspector(s) will be responsible for recording the following information on a daily basis:

- Weather conditions (temperature, wind speed, and direction);
- Number of water trucks in use;
- Cases where visible dust was of such a concentration that abatement measures were implemented;
- Condition of project soils (crusted, damp, or unstable);
- Condition of project access roads (crusted, damp, or unstable);
- Presence of track-out and when it was cleaned;
- Overall status of dust control compliance.

This information will be incorporated into the environmental inspector's daily report.